

- Measurement of relative humidity, air temperature and barometric air pressure
- High accuracy
- Long-term robustness
- Sintered filter cap
- Stainless steel housing

Description

Hygro-Thermo-Baro transmitters COMPACT series are designed to measure relative humidity, air temperature and barometric air pressure.

PTH Thies Compact -Meteo sensor is intended for use at meteorological measuring stations for connection to datalogger systems. Thanks to its universal interface the sensor can also be used as a single solution in every application suitable.

The use of high-quality sensors for the parameters to be measured allows the sensor to achieve the following:

- High accuracy,
- high long-term stability,
- virtually linear characteristic,
- good dynamic behaviour,
- dewing resistance,
- low temperature coefficients,
- small hysteresis.

The interface to the device is digital and consists of an RS485 interface in half duplex mode. In conjunction with ID-based communication the interface enables operation of the sensors in a bus system.

Two data protocols are available:

- ASCII (THIES format)
- Binary (MODBUS-RTU)

In addition to the digital interface, the transmitters have three analogue outputs which can be configured as a current or voltage output. The digital output can be used simultaneously with the analogue outputs.

Dimensional drawing (in mm)



Specifications

Characteristic	Value
Temperature	
Measuring range	-40 ... +80 °C
Accuracy	±0.1 °C @ -40 ... +80 °C @ moved air >2 m/s
Rel. Humidity	
Measuring range	0 ... 100 % rel. Humidity
Accuracy	Typ. ±1,5 % r. H. @ 25 °C and < 80 % r. H. 2 % r. H. over the complete measuring range
Air pressure	
Measuring range	600 ... 1100 hPa
Accuracy	±0.25 hPa @ -20 ... +80 °C @ 800 ... 1100 hPa ±0.50 hPa @ -20 ... +80 °C @ 600 ... 800 hPa
Output Digital	
Interface	RS485 HD
Communication protocol	Modbus RTU (on request Thies ASCII)
Baud rate	38400 (on request 2400 ... 57600)
Device-ID	1 (on request others)
RS485 data format	8N1
Output Analog 3 x 0 ... 1 V	
Temperature	
	-40 ... +80 °C
Offset	-40 °C
Slope	120 °C/V
Rel. Humidity	
	0 ... 100 %
Offset	0 %
Slope	100 %/V
Air pressure	
	600 ... 1100 hPa
Offset	600 hPa
Slope	500 hPa/V
Power supply	
Operating voltage	6 ... 30 VDC
Current consumption	Typ. 3 mA @ 12 V / max. 8,5 mA @ 12 V
General	
Ambient conditions	-40 ... +85 °C
Housing	Stainless steel
Type of protection	IP 67 (applies to the total sensor)
Dimension	see dimensional drawing
Weight	approx. 0.45 kg
Manufacturer	Thies Clima
Admissible environmental conditions	-40 ... +85 °C 0 ... 100 % rel. humidity, including condensation
Filter	Sintered filter cap
Accessories	S50050 Weather and Radiation Shield